ABSTRACT

The present disclosure relates to a composition for dyeing keratin fibers, comprising, in a suitable medium, at least one first oxidation base chosen from 2,3-diamino-6,7-dihydro-1H,5H-pyrazolo[1,2-a]pyrazol-1-one and the addition salts thereof; and at least one second oxidation base chosen from 4,5-diamino-1-[(β-hydroxyethyl)pyrazole and the addition salts thereof. The present disclosure also relates to a process for dyeing keratin fibers using the composition of the present disclosure, the use of this composition for dyeing keratin fibers, and also a method for making the composition of the present disclosure.
COMPOSITION COMPRISING
2,3-DIAMINO-6,7-DIHYDRO-1H,5H-PYRAZOLE-1,2-APYRAZOL-1-ONE AND 4,5-
DIAMINO-1-(B-HYDROXYETHYL)PYRAZOLE, KITS CONTAINING SAID COMPOSITION, AND PROCESS FOR DYING THEREWITH

[0001] This application claims benefit of U.S. Provisional Application No. 61/115,640, filed Nov. 18, 2008, the contents of which are incorporated herein by reference. This application also claims benefit of priority under 35 U.S.C. §119 to French Patent Application No. FR 0857541, filed Nov. 6, 2008, the contents of which are also incorporated herein by reference.

[0002] The present disclosure relates to a composition for dyeing keratin fibers, for example human keratin fibers such as the hair, comprising 2,3-diamino-6,7-dihydro-1H,5H-pyrazolo[1,2-a]pyrazol-1-one and/or the addition salts thereof as the at least one first oxidation base and 4,5-diamino-1-(B-hydroxyethyl)pyrazole and/or the addition salts thereof as the at least one second oxidation base.

[0003] It is known practice to dye keratin fibers, for example human keratin fibers such as the hair, with dye compositions containing oxidation dye precursors, such as ortho- or para-phenylenediamines, ortho- or para-aminophenols, and heterocyclic compounds such as pyrimidopyrazole derivatives, pyrazolo[1,5-a]pyrimidine derivatives, pyrimidine derivatives, pyridine derivatives, indole derivatives and indoline derivatives, which are generally known as oxidation bases. Oxidation dye precursors, or oxidation bases, are colorless or weakly colored compounds which, when combined with oxidizing products, can give rise to colored or coloring compounds via a process of oxidative condensation. Permanent colorations may thus be obtained.

[0004] It is also known that the shades obtained with these oxidation bases may be varied by combining them with couplers or coloration modifiers, the latter being chosen for example from meta-phenylenediamines, meta-aminophenols, meta-hydroxylphenols and certain heterocyclic compounds.

[0005] The variety of molecules used as regards the oxidation bases and couplers allows a wide range of colors to be obtained.

[0006] The use of oxidation bases such as para-phenylene-diamine and para-aminophenol derivatives can allow quite a broad range of colors to be obtained at basic pH, but may not always, however, simultaneously achieve shades with good chromaticity, while at the same time giving the hair excellent properties in terms of strength of color, uniformity of the color, and fastness with respect to external agents.

[0007] The use of these bases at neutral pH does not always allow a varied range of shades to be produced, for example warm shades such as reds and oranges.

[0008] Thus there is a need in the art to provide novel compositions for dyeing keratin fibers that make it possible to obtain a coloration with at least one of the following attributes: strong, powerful, chromatic, aesthetic, and sparingly selective red and/or copper shades, and for example intermediate reddish-copper and coppery-red shades, showing good resistance to the various attacking factors to which the hair may be subjected, such as shampoos, light, sweat, and permanent-wave reshaping operations.

[0009] The present disclosure therefore relates to a composition for dyeing keratin fibers, comprising, in a suitable medium:

[0010] at least one first oxidation base chosen from 2,3-diamino-6,7-dihydro-1H,5H-pyrazolo[1,2-a]pyrazol-1-one and the addition salts thereof:

[0011] at least one second oxidation base chosen from 4,5-diamino-1-(B-hydroxyethyl)pyrazole and the addition salts thereof.

[0012] The present disclosure can make it possible to obtain coloring of the keratin fibers in strong and/or chromatic red and/or coppery shades. The intermediate coppery-red and reddish-copper shades obtained can be aesthetic with great strength and/or chromaticity.

[0013] The present disclosure can also make it possible to obtain sparingly selective colorations that show good resistance to the various attacks to which the hair may be subjected, such as shampoos, light, sweat, and permanent-wave reshaping operations. It furthermore can also make it possible to obtain strong colorations at neutral pH.

[0014] The present disclosure also relates to a process for dyeing keratin fibers using the composition of the present disclosure, the use of this composition for dyeing keratin fibers, and also a method for making the composition of the present disclosure.

[0015] The present disclosure also relates to a dyeing kit comprising, in a first compartment, a dye composition containing 2,3-diamino-6,7-dihydro-1H,5H-pyrazolo[1,2-a]pyrazol-1-one and/or a salt thereof as the at least one first oxidation base, and 4,5-diamino-1-(B-hydroxyethyl)pyrazole and/or a salt thereof as the at least one second oxidation base, and, in a second compartment, a composition containing at least one oxidizing agent.

[0016] Unless otherwise indicated, the limits of the ranges of values which are given in the context of the present disclosure are included in these ranges.

[0017] According to at least one embodiment, in the composition in accordance with the disclosure, the molar ratio of the at least one first oxidation base to the at least one second oxidation base has a value that ranges from 0.025 to 20, such as from 0.03 to 15, such as from 0.05 to 10.

[0018] The compositions of the disclosure may contain the at least one first oxidation base and/or the at least one second oxidation base, respectively, in the form of a mixture of several salts or of a mixture of a nonsalified compound with at least one salt.

[0019] The dye composition of the disclosure may contain at least one additional oxidation base that is different from the at least one first and the at least one second oxidation bases chosen from those conventionally used for dyeing keratin fibers.

[0020] The composition of the present disclosure may, for example, comprise at least one additional oxidation base chosen from para-phenylenediamines, bis(phenyl)alkylenediamines, para-aminophenols, bis-para-aminophenols, ortho-aminophenols, ortho-phenylenediamines and heterocyclic bases other than 2,3-diamino-6,7-dihydro-1H,5H-pyrazolo[1,2-a]pyrazol-1-one, 4,5-diamino-1-(B-hydroxyethyl)pyrazole, and the addition salts thereof.

Among the bis(phenylalkyl)aminediamines, non-limiting mention may be made, by way of example, of N,N-bis(β-hydroxyethyl)-N,N-bis[4-aminophenyl)-1,3-diaminopropanol, N,N-bis(β-hydroxyethyl)-N,N-bis[4-aminoethyl]methylenediamine, N,N-bis(β-hydroxyethyl)-N,N-bis[4-aminophenyl)tetramethylenediamine, N,N-bis(β-hydroxyethyl)-N,N-bis[4-aminophenyl)tetramethylenediamine, N,N-bis(4-methylaminophenyl)tetramethylenediamine, N,N-bis(ethy1)-N,N-bis(4-amino-3-methylphenyl)ethylenediamine, 1,8-bis(2,5-diaminophenox)3,6-dioxoacetate, and the addition salts thereof.

Among the para-aminophenols, non-limiting mention may be made, by way of example, of para-aminophenol, 3-methyl-4-aminophenol, 4-amino-3-fluorophenol, 4-amino-3-hydroxymethylphenol, 4-amino-2-hydroxymethylphenol, 4-amino-2-methoxyethylphenol, 4-amino-2-aminohydroxymethylphenol, 4-amino-2-aminomethylphenol, 4-amino-2-β-hydroxyethylaminomethylphenol, 4-amino-2-fluorophenol, and the addition salts thereof.

Among the ortho-aminophenols, non-limiting mention may be made, by way of example, of 2-aminophenol, 2-amino-5-methylphenol, 2-amino-6-methylphenol, 5-acetamido-2-aminophenol, and the addition salts thereof.

Among the heterocyclic bases, non-limiting mention may be made, by way of example, of pyridine derivatives, pyrimidine derivatives, and pyrazole derivatives.

Among the pyridine derivatives, non-limiting mention may be made of the compounds described, for example, in patents GB 1 062 978 and GB 1 153 196, such as 2,5-diaminopyridine, 2-(4-methoxyphenyl)amino-3-aminopyridine, 2,3-diamino-6-methoxy pyridine, 2-(β-methoxyethyl) amino-3-amino-6-methoxy pyridine, daminopyridine, and the addition salts thereof.

Other pyridine oxidation bases that may be used in the present disclosure for example are the 3-amino pyrazolopyridine, pyridine oxidation bases, or the addition salts thereof, described for example in patent application FR 2 801 308. By way of example, non-limiting mention may be made of pyrazole[1,5-α]pyridin-3-ylamine, 2-acetylamino pyrazolopyridine[1,5-α]pyridin-3-ylamine, 2-morpholin-4-pyrazolopyridine[1,5-α]pyridin-3-ylamine, 3-amino pyrazolopyridine[1,5-α]pyridin-3-ylamine, 2-(5-yl)ethanol, 2-(3-amino pyrazolopyridine[1,5-α]pyridin-3-yl) ethanol, 3-amino pyrazolopyridine[1,5-α]pyridin-3-yl)ethanol, 3-phenyl-4-pyrazolopyridine[1,5-α]pyridin-3-yl)ethanol, 3-amino pyrazolopyridine[1,5-α]pyridin-3-yl)ethanol, and 3-amino pyrazolopyridine[1,5-α]pyridin-3-yl)ethanol, and also the addition salts thereof.

Among the pyrimidine derivatives, non-limiting mention may be made of the compounds described, for example, in patents DE 23 59 399; JP 88-169571; JP 05-61324; EP 0 770 375 or patent application WO 96/15765, such as 2,4,5,6-tetraaminopyrimidine, 4,5,6-tri-aminopyrimidine, 2-hydroxy-4,5,6-tri-aminopyrimidine, 2,4-dihydroxy-5,6-diaminopyrimidine and 2,5,6-triaminopyrimidine, and pyrazolopyrimidine derivatives such as those mentioned in patent application FR A 2 750 048 and known which non-limiting mention may be made of pyrazolopyridine[1,5-α]pyridin-3-7-diamine, 2,5-dimethylpyrazolopyridine[1,5-α]pyridin-3-7-diamine, 2,5-dimethylpyrazolopyridine[1,5-α]pyridin-3-7-diamine, 2,5-dimethylpyrazolopyridine[1,5-α]pyridin-3-7-diamine, 2,5-dimethylpyrazolopyridine[1,5-α]pyridin-3-7-diamine, 2,5-dimethylpyrazolopyridine[1,5-α]pyridin-3-7-diamine, 2,5-dimethylpyrazolopyridine[1,5-α]pyridin-3-7-diamine, 2,5-dimethylpyrazolopyridine[1,5-α]pyridin-3-7-diamine, and the addition salts thereof.

Among the pyrazole derivatives, non-limiting mention may be made of the compounds described in patents DE 38 43 892 and DE 41 33 957 and patent applications WO 94/08969, WO 94/08970, BR-A 2 733 749 and DE 195 43 988 such as 4,5-diamino-1-methylpyrazole, 3,4-diaminopyrazole, 4,5-diamino-1-(4-chlorobenzyl)pyrazole, 4,5-diamino-1,3-dimethylpyrazole, 4,5-diamino-3-methyl-1-pyrazole, 4-diamino-1,3-dimethyl-5-hydrazinopyrazole, 1-benzyl-4,5-diamino-3-methylpyrazole, 4,5-diamino-3-tert-butyl-1-methylpyrazole, 4,5-diamino-3-tert-butyl-3-methylpyrazole, 4,5-diamino-1-ethyl-3-methylpyrazole, 4,5-diamino-1-ethyl-3-(4'-methoxyphenyl)pyrazole, 4,5-diamino-1-ethyl-3-methylpyrazole, 4,5-diamino-3-hydroxymethyl-1-methylpyrazole, 4,5-diamino-3-hydroxymethyl-1-isopropylpyrazole, 4,5-diamino-3-methyl-1-
isopropylpyrazole, 4-amino-5-(2-aminoethyl)amino-1,3-dimethylpyrazole, 3,4,5-triaminopyrazole, 1-methyl-3,4,5-trimino.pyrazole, 3,5-diamino-1-methyl-4-methylamino.pyrazole, 3,5-diamino-(β]-hydroxyethylamino)1-methylpyrazole, and the addition salts thereof.

[0031] In at least one embodiment of the present disclosure, the composition disclosed herein comprises at least one additional oxidation base chosen from para-aminophenols and para-phenylendiamines. For example, among the p-aminophenols, para-aminophenol, 3-methyl-4-aminophenol, and the addition salts thereof can be used. For instance, among the para-phenylendiamines, para-toluidinediamine, N,N-bis(β]-hydroxyethyl)para-phenylenediamine, and the addition salts thereof can be used.

[0032] The dye composition of the disclosure may also contain at least one coupler and/or the addition salts thereof conventionally used for dyeing keratin fibers.

[0033] The composition of the present disclosure may, for example, comprise at least one coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols, naphthalene couplers, heterocyclic couplers, and/or the addition salts thereof.

[0034] By way of example of the at least one coupler, non-limiting mention may be made of 3-aminophenol, 2-methyl-5-aminophenol, 2-methyl-5-(β]-hydroxyethylamino)phenol, 2-chloro-6-methyl-3-aminophenol, 1,3-dihydroxybenzene, 1,3-dihydroxy-2-methylbenzene, 4-chloro-1,3-dihydroxybenzene, 2,4-diamino-1(β]-hydroxyethyl)oxy) benzene, 2-amino-4(β]-hydroxyethylamino)1-methoxybenzene, 1,3-diaminobenzene, 1,3-bis(2,4-diaminophenoxymethylene, 3-ureidoaniline, 3-ureido-1-dimethylaminobenzene, sesamol, 1-β]-hydroxyethylamino-3, 4-methylenedioxynbenzene, α-naphthol, 2-methyl-1-naphthol, 6-hydroxyindole, 4-hydroxyindole, 4-hydroxy-N-methylindole, 2-amino-3-hydroxypridine, 6-hydroxybenzomorpholine, 3,5-diamino-2,6-dimethoxypridine, 1-N(β]-hydroxyethyl)amino-3,4-methylenedioxynbenzene, 2,6-bis(β]-hydroxyethylamino)toluene, and the addition salts thereof.

[0035] In at least one embodiment, the composition in accordance with the disclosure comprises at least one additional coupler chosen from meta-aminophenols. For example, the composition in accordance with the disclosure may comprise at least one additional coupler chosen from 2-chloro-6-methyl-3-aminophenol, 2-methyl-5-aminophenol, 2-methyl-5-(β]-hydroxyethylamino)phenol, and the addition salts thereof.

[0036] The at least one first oxidation base, the at least one second oxidation base, and the at least one additional oxidation base may each be present in the composition of the disclosure in an amount ranging from 0.001% to 10% by weight, relative to the total weight of the dye composition, such as from 0.005% to 6%.

[0037] The at least one coupler may be present in the composition of the disclosure in an amount, for each coupler, ranging from 0.001% to 10% by weight, relative to the total weight of the dye composition, such as from 0.005% to 6%.

[0038] In general, the addition salts of the oxidation bases and of the couplers that can be used in the context of the disclosure are for example chosen from the addition salts with an acid, such as the hydrochlorides, hydrobromides, sulfates, citrates, succinates, tartrates, lactates, (C₆-C₈)alkylsulfonates, and for example methylsulfonates, tosylates, benzenesulfonates, phosphates and acetates, and the addition salts with a base, such as sodium hydroxide, potassium hydroxide, aqueous ammonia, amines or alkalanolamines.

[0039] The medium that is suitable for dyeing, also known as a dye support, is a cosmetic medium generally constituted of water or a mixture of water and at least one organic solvent. By way of organic solvent, non-limiting mention may, for example, be made of C₁-C₆ lower alkanols, such as ethanol and isopropanol, polyols and polyglycols ethers such as 2-butoxyethanol, propylene glycol, propylene glycol monomethyl ether, diethylene glycol monomethyl ether and diethylene glycol monomethyl ether, and also aromatic alcohols such as benzyl alcohol or phenoxyethanol, and mixtures thereof.

[0040] The solvents may for example be present in an amount ranging from 1% to 40% by weight, relative to the total weight of the dye composition, for example from 5% to 30% by weight.

[0041] The dye composition in accordance with the disclosure may also contain at least one adjuvant chosen from the various adjuvants conventionally used in compositions for dyeing the hair, such as anionic, cationic, nonionic, amphoteric or zwitterionic surfactants or mixtures thereof, anionic, cationic, nonionic, amphoteric or zwitterionic polymers or mixtures thereof, inorganic or organic thickeners, and for instance anionic, cationic, nonionic and amphoteric associative polymeric thickeners, sequestering agents, fragrances, buffers, dispersing agents, conditioning agents, such as for example silicones, which may be volatile or non-volatile, and modified or unmodified, film-forming agents, ceramides, preservatives, and opacifiers.

[0042] The at least one adjuvant may be present in an amount, for each adjuvant, ranging from 0.01% to 20% by weight, relative to the weight of the dye composition.

[0043] Of course, those skilled in the art will take care to select this or these additional compound(s) in such a way that the beneficial properties intrinsically associated with the oxidation dye composition in accordance with the disclosure are not, or are not substantially, impaired by the addition(s) envisaged.

[0044] The pH of the dye composition in accordance with the disclosure generally ranges from 3 to 12, for example from 5 to 11. It may be adjusted to the desired value using acidifying or basifying agents normally used in the dyeing of keratin fibers, or alternatively using standard buffer systems.

[0045] Among the acidifying agents, non-limiting mention may be made, by way of example, of inorganic or organic acids such as hydrochloric acid, orthophosphoric acid, sulfurous acid, carboxylic acids such as acetic acid, tartaric acid, citric acid or lactic acid, and sulfonic acids.

[0046] Among the basifying agents, non-limiting mention may be made, by way of example, of aqueous ammonia, alkali metal carbonates, alkylammoniums such as mono-, di- and triethanolamines and also derivatives thereof, sodium hydroxide, potassium hydroxide and the compounds of formula (II):

\[ \text{R}_1 \text{N} = \text{W} \rightarrow \text{N} \quad \text{R}_2 \]

[0047] in which W is a propylene residue optionally substituted with a hydroxy group or a C₁-C₄ alkyl radical; and R₁, R₂, R₃, and R₄, which may be identical or different, represent a hydrogen atom, a C₃-C₈ alkyl radical, or a C₁-C₄ hydroxyalkyl radical.
The dye composition according to the disclosure may be in various forms, such as in the form of liquids, creams, or gels, or in any other form that is suitable for dyeing keratin fibers such as human hair.

The present disclosure also relates to a process for dyeing keratin fibers, comprising:

- applying to the keratin fibers a composition comprising, in a suitable medium:
  - at least one first oxidation base chosen from 2,3-diamino-6,7-dihydro-1H,5H-pyrazolo[1,2-a]pyrazol-1-one and the addition salts thereof; and
  - at least one second oxidation base chosen from 4,5-diamino-1-((β-hydroxyethyl)pyrazole and the addition salts thereof in the presence of at least one oxidizing agent; and
- leaving the resultant composition on the keratin fibers for a period of time that is sufficient to develop the desired coloration. The color is developed using at least one oxidizing agent. The color may be developed at acidic, neutral, or alkaline pH, and the at least one oxidizing agent may be added to the composition of the disclosure just at the time of use, or it may be used starting from an oxidizing composition containing it, which is applied simultaneously with or sequentially to the composition disclosed herein.

According to at least one embodiment, the composition according to the present disclosure is mixed, for example at the time of use, with a composition containing, in a medium that is suitable for dyeing, at least one oxidizing agent, the at least one oxidizing agent being present in an amount that is sufficient to develop a coloration. The “ready-to-use” mixture obtained is then applied to the keratin fibers. After a leave-in time ranging from 3 to 50 minutes, for example 5 to 30 minutes, the keratin fibers are rinsed, washed with shampoo, rinsed again, and then dried.

The oxidizing agents conventionally used for the oxidation dyeing of keratin fibers are, for example, hydrogen peroxide, urea peroxide, alkali metal bromates, persulphates such as perborates and persulfates, peracids and peroxide enzymes, among which non-limiting mention may be made of peroxides, 2-electron oxidoreductases such as uricases, and 4-electron oxygenases such as laccases. For example, hydrogen peroxide can be used in at least one embodiment.

The oxidizing composition may also contain at least one adjuvant chosen from the various adjuvants conventionally used in compositions for dyeing the hair and as defined herein.

The pH of the oxidizing composition containing the at least one oxidizing agent is such that, after mixing with the dye composition, the pH of the resulting composition applied to the keratin fibers for example can range from 3 to 12, such as from 5 to 11. It may be adjusted to the desired value via acidifying or basifying agents normally used in the dyeing of keratin fibers and as defined herein.

The ready-to-use composition that is applied to the keratin fibers may be in various forms, such as in the form of liquids, creams, or gels or any other form suitable for dyeing keratin fibers such as human hair.

The present disclosure also relates to a multi-compartment dyeing device or “kit”, in which a first compartment contains the dye composition of the present disclosure as defined herein with the exception of the at least one oxidizing agent, and a second compartment contains an oxidizing composition. This device may be equipped with an applicator for applying the desired mixture to the hair, such as the devices described in patent FR-2 586 913. The multi-compartment device for dyeing keratin fibers thus comprises:

- a first compartment containing a dye composition comprising, in a suitable medium:
  - at least one first oxidation base chosen from 2,3-diamino-6,7-dihydro-1H,5H-pyrazolo[1,2-a]pyrazol-1-one and the addition salts thereof; and
  - at least one second oxidation base chosen from 4,5-diamino-1-((β-hydroxyethyl)pyrazole and the addition salts thereof.

- A second compartment containing at least one oxidizing agent.

- The present disclosure also relates to a method for making a composition for dyeing keratin fibers comprising combining, in a suitable medium:
  - at least one first oxidation base chosen from 2,3-diamino-6,7-dihydro-1H,5H-pyrazolo[1,2-a]pyrazol-1-one and the addition salts thereof; and
  - at least one second oxidation base chosen from 4,5-diamino-1-((β-hydroxyethyl)pyrazole and the addition salts thereof wherein the ingredients can be added in any order.

The examples which follow serve to illustrate the disclosure without, however, being limited in nature.

### EXAMPLE 1

The following dye composition was prepared (amounts expressed with respect to the total weight of the composition, unless otherwise indicated):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lauryl alcohol comprising 12 EO</td>
<td>7</td>
</tr>
<tr>
<td>Deceyl alcohol comprising 3 EO</td>
<td>10</td>
</tr>
<tr>
<td>Oleooyl alcohol comprising 30 EO</td>
<td>4</td>
</tr>
<tr>
<td>Cetyl stearyl alcohol</td>
<td>11.5</td>
</tr>
<tr>
<td>Laure acid</td>
<td>3</td>
</tr>
<tr>
<td>Glycol disteartate</td>
<td>2</td>
</tr>
<tr>
<td>AEROSIL R 972 (Degassia)</td>
<td>1.2</td>
</tr>
<tr>
<td>CARBOPOL 980 (Lubrizol)</td>
<td>0.4</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>10</td>
</tr>
<tr>
<td>Monoethanolamine</td>
<td>1.6</td>
</tr>
<tr>
<td>MEXOMER PO (Chimex)</td>
<td>3 g AM</td>
</tr>
<tr>
<td>MERQUAT 280 (Naeco)</td>
<td>2.2 g AM</td>
</tr>
<tr>
<td>Sequestering agent, antioxidant,</td>
<td>q.s.</td>
</tr>
<tr>
<td>reducing agent, fragrance</td>
<td></td>
</tr>
<tr>
<td>Aqueous ammonia (20% of NH₃)</td>
<td>10</td>
</tr>
<tr>
<td>2,3-diamino-6,7-dihydro-1H,5H-</td>
<td>0.3</td>
</tr>
<tr>
<td>pyrazolo[1,2-a]pyrazol-1-one, 2CH₃SO₃H</td>
<td></td>
</tr>
<tr>
<td>4,5-diamino-1-((β-hydroxyethyl)pyrazole, sulfate</td>
<td>1.7</td>
</tr>
<tr>
<td>2-chloro-6-methyl-3-aminophenol</td>
<td>0.3</td>
</tr>
<tr>
<td>2-methoxybenzaldehyde</td>
<td>0.42</td>
</tr>
<tr>
<td>2-methyl-5-aminophenol</td>
<td>0.2</td>
</tr>
<tr>
<td>Water</td>
<td>q.s. 100 g</td>
</tr>
</tbody>
</table>

### EXAMPLE 2

At the time of use, 1 part by weight of the Example 1 dye composition was mixed with 1.5 parts by weight of a 20-volumes hydrogen peroxide solution at pH 2.2. A final pH close to 9.6 was obtained.

The mixture obtained was applied to locks of grey hair containing 90% white hairs. After a leave-on time of 30 minutes at ambient temperature, the locks were rinsed, washed with a standard shampoo, rinsed again and then dried.

The hair coloration was evaluated visually. A sparingly selective, chromatic, coppery-red blonde shade was obtained.

### EXAMPLE 3

The following dye composition was prepared (amounts expressed with respect to the total weight of the composition, unless otherwise indicated):
7. A composition according to claim 5, wherein the at least one additional oxidation base is chosen from para-phenylene-diamine, para-toluenediamine, N,N-bis[(β-hydroxyethyl)] para-phenylene diamine, and the addition salts thereof.

8. A composition according to claim 1, wherein the at least one first oxidation base and the at least one second oxidation base are each present in an amount ranging from 0.001% to 10% by weight, relative to the total weight of the composition.

9. A composition according to claim 1, further comprising at least one coupler.

10. A composition according to claim 9, wherein the at least one coupler is chosen from meta-aminophenols.

11. A composition according to claim 10, wherein the at least one coupler is chosen from 2-chloro-6-methyl-3-aminophenol, 2-methyl-5-aminophenol, 2-methyl-5-[(β-hydroxyethyl) pyrazolone], and the addition salts thereof.

12. A composition according to claim 1, further comprising at least one oxidizing agent.

13. A process for dyeing keratin fibers, comprising:
   applying to the keratin fibers a composition comprising, in a suitable medium, at least one first oxidation base chosen from 2,3-diamino-6,7-dihydro-1H,5H-pyrazolo[1,2-a]pyrazol-1-one and the addition salts thereof; and
   at least one second oxidation base chosen from 4,5-diamino-1-(β-hydroxyethyl)pyrazole and the addition salts thereof.

14. A multi-compartment device for dyeing keratin fibers, comprising:
   a first compartment containing a dye composition comprising, in a suitable medium:
   at least one first oxidation base chosen from 2,3-diamino-6,7-dihydro-1H,5H-pyrazolo[1,2-a]pyrazol-1-one and the addition salts thereof; and
   at least one second oxidation base chosen from 4,5-diamino-1-(β-hydroxyethyl)pyrazole and the addition salts thereof.

15. A method for making a composition for dyeing keratin fibers comprising combining, in a suitable medium:
   at least one first oxidation base chosen from 2,3-diamino-6,7-dihydro-1H,5H-pyrazolo[1,2-a]pyrazol-1-one and the addition salts thereof; and
   at least one second oxidation base chosen from 4,5-diamino-1-(β-hydroxyethyl)pyrazole and the addition salts thereof.

   wherein the ingredients can be added in any order.

   * * * * *